		Pushing the En	velope
		2004 Mathem	
		State Curricu	ılum
Maryland Mathemati	cs		
Grade 5			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	MD	MA.5.3.A.1.a	Measurement units: Students read customary and metric measurement units and estimate and determine weight or mass
Chemistry (pgs. 25-41)	MD	MA.5.3.C.1.d	Applications in measurement: Students estimate and apply measurement formulas and estimate and determine volume by counting
Physics and Math (pgs. 43-63)	MD	MA.5.1.A.1.a	Patterns and functions: Students identify, describe, extend, and create numeric patterns and functions and interpret and write a rule for a one-operation (+,-, x, ÷ with no remainders) function table
		Pushing the En	velope
		2004 Mathema	
		State Curricu	
Maryland Mathemati	CS		
Grade 6			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	MD	MA.6.1.B.2.e	Identify, write, solve, and apply equations and inequalities: Apply given formulas to a problem solving situation
Chemistry (pgs. 25-41)	MD	MA.6.1.B.2.e	Identify, write, solve, and apply equations and inequalities: Apply given formulas to a problem solving situation
Physics and Math (pgs. 43-63)	MD	MA.6.1.A.1.b	Patterns and functions: Students identify, describe, extend, and create numeric patterns and functions and interpret and interpret and write a rule for a one-operation (+, -, x, ÷) function table
Physics and Math (pgs. 43-63)	MD	MA.6.1.B.1.a	Write and evaluate expressions: Write an algebraic expression to represent unknown quantities
Physics and Math (pgs. 43-63)	MD	MA.6.1.B.2.e	Identify, write, solve, and apply equations and inequalities: Apply given formulas to a problem solving situation
Physics and Math (pgs. 43-63)	MD	MA.6.6.A.1.c	Patterns and functions: Students identify, describe, extend, and create numeric patterns and functions and interpret and identify and determine equivalent forms of fractions as decimals, as percents, and as ratios
Physics and Math			Analyze ratios, proportions or percents:
(pgs. 43-63)	MD	MA.6.6.C.3.a	Represent ratios in a variety of forms
Physics and Math			Analyze ratios, proportions or percents: Use
(pgs. 43-63)	MD	MA.6.6.C.3.b	ratios and unit rates to solve problems
Rocket Activity (pgs. 69-75)	MD	MA.6.1.B.2.e	Identify, write, solve, and apply equations and inequalities: Apply given formulas to a problem solving situation

		Duahing the F-	volono
		Pushing the En 2004 Mathem	
		State Curricu	
Maryland Mathemati	cs	Otato Garriot	
Grade 7			
Activity/Lesson	State	Standards	
			Identify, write, solve, and apply equations and
Types of Engines (inequalities: Apply given formulas to a problem
pgs. 11-23)	MD	MA.7.1.B.2.e	solving situation
			Identify, write, solve, and apply equations and
Chemistry (pgs. 25-			inequalities: Apply given formulas to a problem
41)	MD	MA.7.1.B.2.e	solving situation
			Write and evaluate expressions: Write an
Physics and Math			algebraic expression to represent unknown
(pgs. 43-63)	MD	MA.7.1.B.1.a	quantities
Dleveine and NA-44-			Identify, write, solve, and apply equations and
Physics and Math	MD	MA 7 4 D 0	inequalities: Apply given formulas to a problem
(pgs. 43-63)	MD	MA.7.1.B.2.e	solving situation
Dhysics and Math			Determine equivalent forms of rational numbers
Physics and Math	MD	NAA 7 G A 4 a	expressed as fractions, decimal, percents, and
(pgs. 43-63)	MD	MA.7.6.A.1.c	ratios
Physics and Math	MD	MA.7.6.C.3.a	Analyze ratios, proportions or percents:
(pgs. 43-63)	טואו	IVIA.7.6.C.3.a	Determine equivalent ratios Analyze ratios, proportions or percents:
Physics and Math			Determine and use rates, unit rates, and
(pgs. 43-63)	MD	MA.7.6.C.3.b	percents as ratios in the context of a problem
(pgs. 45-05)	IVID	IVIA. 7 . 0. C. 3. D	Identify, write, solve, and apply equations and
Rocket Activity (pgs.			inequalities: Apply given formulas to a problem
69-75)	MD	MA.7.1.B.2.e	solving situation
	1112	100 000 000	conning chadateri
		Pushing the En	velope
		2004 Mathem	
		State Curricu	ılum
Maryland Mathemati	cs		
Grade 8			
Activity/Lesson	State	Standards	
			Identify, write, solve, and apply equations and
Types of Engines (inequalities: Apply given formulas to a problem
pgs. 11-23)	MD	MA.8.1.B.2.f	solving situation
			Identify, write, solve, and apply equations and
Chemistry (pgs. 25-			inequalities: Apply given formulas to a problem
41)	MD	MA.8.1.B.2.f	solving situation
			Identify, write, solve, and apply equations and
Physics and Math			inequalities: Apply given formulas to a problem
(pgs. 43-63)	MD	MA.8.1.B.2.f	solving situation
5			Identify, write, solve, and apply equations and
Rocket Activity (pgs.	MD	NAA 0 4 D 0 4	inequalities: Apply given formulas to a problem
69-75)	MD	MA.8.1.B.2.f	solving situation
		Drahina 4ha F	volene
			VEHILL
		Pushing the En 2004 Mathem	

Maryland Mathematics Grades 9-12 (Algebra/Data Analysis)			
Activity/Lesson	State	Standards	
Physics and Math			The student will demonstrate the ability to investigate, interpret, and communicate solutions to mathematical and real-world problems using patterns, functions and algebra. The student will represent patterns and/or functional relationships in a table, as a graph,
(pgs. 43-63)	MD	MA.9-12.1.1.2	and/or by mathematical expression.
Physics and Math (pgs. 43-63)	MD	MA.9-12.1.2.5	The student will demonstrate the ability to investigate, interpret, and communicate solutions to mathematical and real-world problems using patterns, functions and algebra. The student will apply formulas and/or use matrices (arrays of numbers) to solve real-world problems.
Rocket Activity (pgs. 69-75)	MD	MA.9-12.1.2.5	The student will demonstrate the ability to investigate, interpret, and communicate solutions to mathematical and real-world problems using patterns, functions and algebra. The student will apply formulas and/or use matrices (arrays of numbers) to solve real-world problems.